



30539

United States Department of the Interior

TAKE
PRIDE IN
AMERICA

GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

111 Great Valley Parkway
Malvern, Pennsylvania 19355
Phone (610) 647-9008 FAX (610) 647-4594

December 8, 1995

Mr. Patrick M. McManus
U.S. Environmental Protection Agency, Region III
Mail Code 3HW21
841 Chestnut Building
Philadelphia, Pennsylvania 19107-4431

Dear Mr. McManus:

Enclosed is a copy of the final, approved version of Open-File Report 95-747, a map showing water levels at and near North Penn Area 12 site.

Also enclosed are copies of water-level recorder charts that show the depth to water in wells at the North Penn Area 12 Superfund Site, Worcester Township, Montgomery County, Pennsylvania. The charts for most wells were run by a 32-day clock, such that each block on the horizontal axis represents 8 hours. The charts for MW-4 were run by an 8-day clock, such that each block on that horizontal axis represents 2 hours. The vertical axis is depth to water in feet. Most water levels were corrected to depths below the land surface datum (LSD). The charts record water levels starting early to mid-July, mid-September, and mid-October 1995. No data was collected from mid-August to mid-September, 1995. Water-level recorders were installed on wells MW- 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, and T- 3, 5, 6. However, data are not complete for some wells: T-6 was vandalized; access to MW-5 was limited during growing season because it was in a field; and MW-4 (near the pumping well at the Rehab Center) was followed for only limited periods.

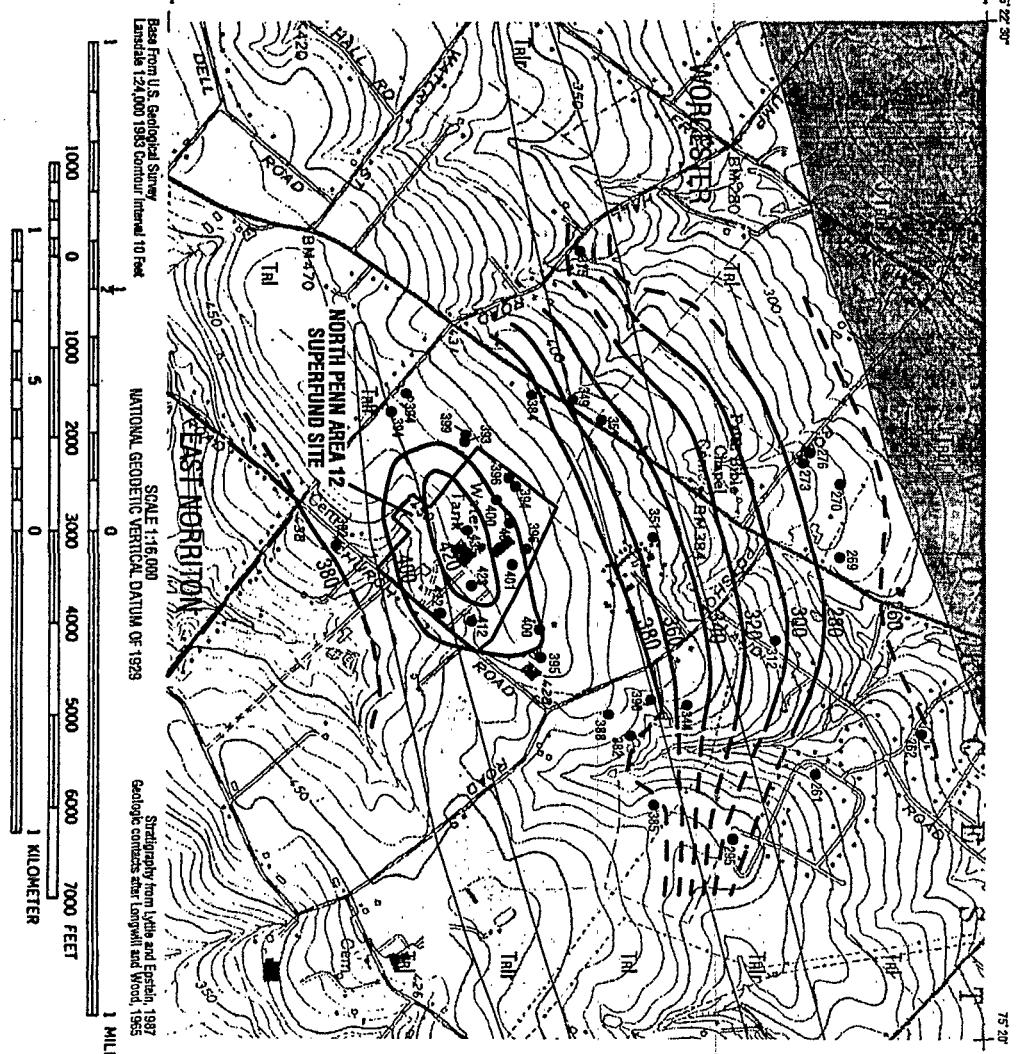
If you have any questions about these data, please call me at (610) 647-9008 ext. 209.

Sincerely yours,

Lisa Senior
Hydrologist

AR001068

EXPLANATION



REFERENCES CITED

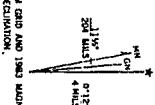
- Longwell, S.M., and Wood, C.R., 1965, Ground-Water Resources of the Brunswick Formation in Montgomery and Berks Counties, Pennsylvania: Pennsylvania Geological Survey, 4th Series, Bulletin W-22, 59 p.
- Lytle, P.T., and Epstein, J.B., 1987, Geologic map of the Newark 1° x 2° Quadrangle, New Jersey, Pennsylvania, and New York: U.S. Geological Survey Miscellaneous Investigative Series Map I-1715, 2 plates, scale 1:250,000.

ALTITUDE AND CONFIGURATION OF THE POTENSIOMETRIC SURFACE IN THE UPPER TRIASSIC SEDIMENTARY ROCKS AT AND NEAR THE NORTH PENN AREA 12 SUPERFUND SITE, WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA, JULY 20-27, 1995

By Kevin E. Grazul

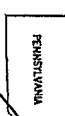
1995

UNITS AND 1960 MAGNETIC NORTH



LOCATION OF MAPPED AREA

AR001069



MW1 Start date 7-5-95

CH-

PRINTED IN U.S.A.

M6-1425 mew
7-5-95 18.15
67.28 emp
2.93 m
64.95 anal

C4

65

66

67

68

69

70

RT NO. ID F-1

7246 - 233 = 7213
9-8-95

AR001070

MW-2 Start date 7-5-95

PRINTED IN U.S.A.

NP-12 CMM 23 ms - 1426
7-5-95 17:30

Type 7134
- 240
6894

68

69

70

71

72

73

RT NO. ID F-1

GRAPHIC CONTROLS CORPORATION BUFFALO NEW YORK

AR001071

1640 - 240 = 74.00 7-12-95

91288

MW-3 Start date 7-5-95

CHART NC

MINTEWU

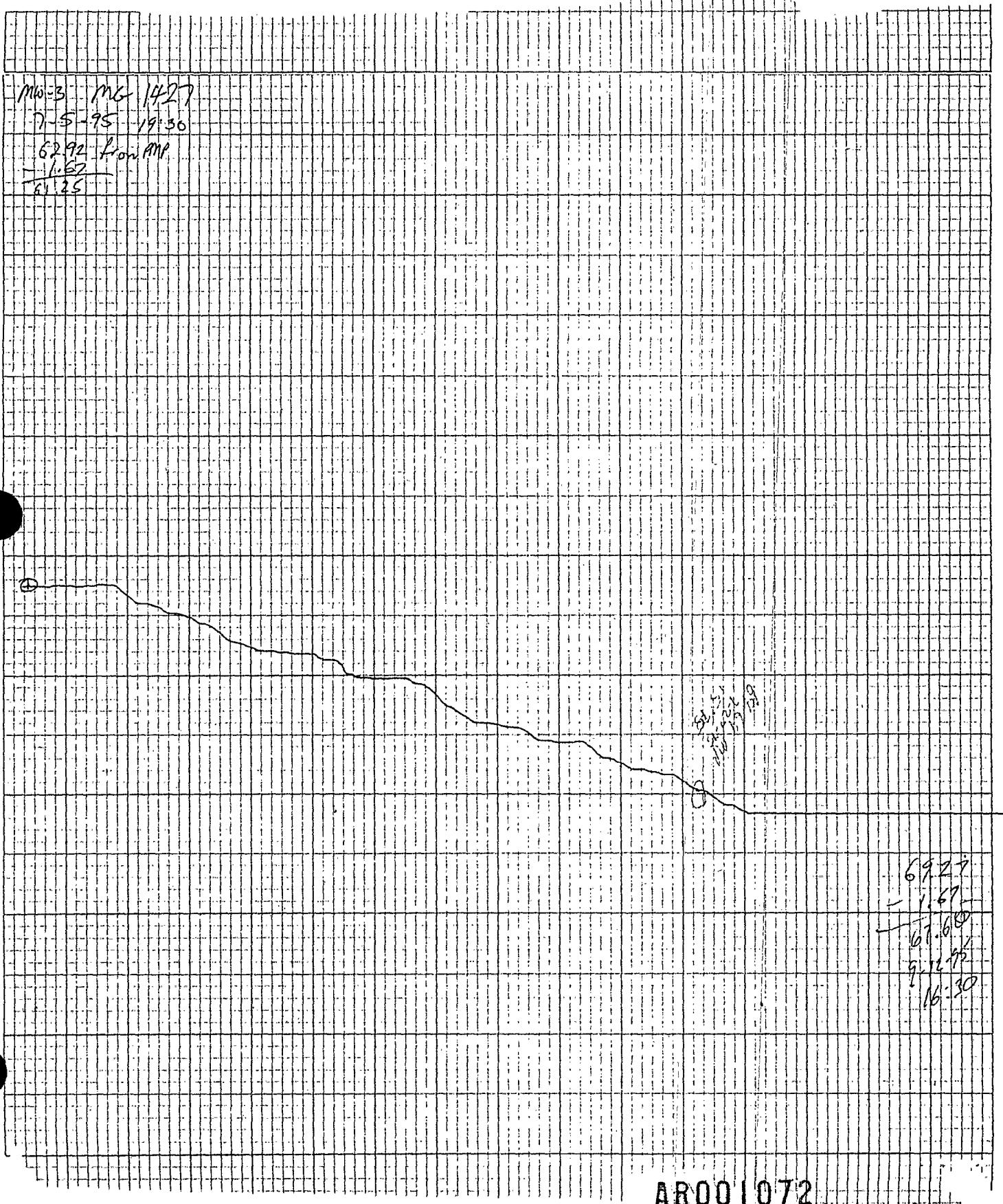
MW: 3 MG 1427
7-5-95 1930
62.92 from AMM
~~1.62~~
~~61.25~~

60

610 N
FALO

62

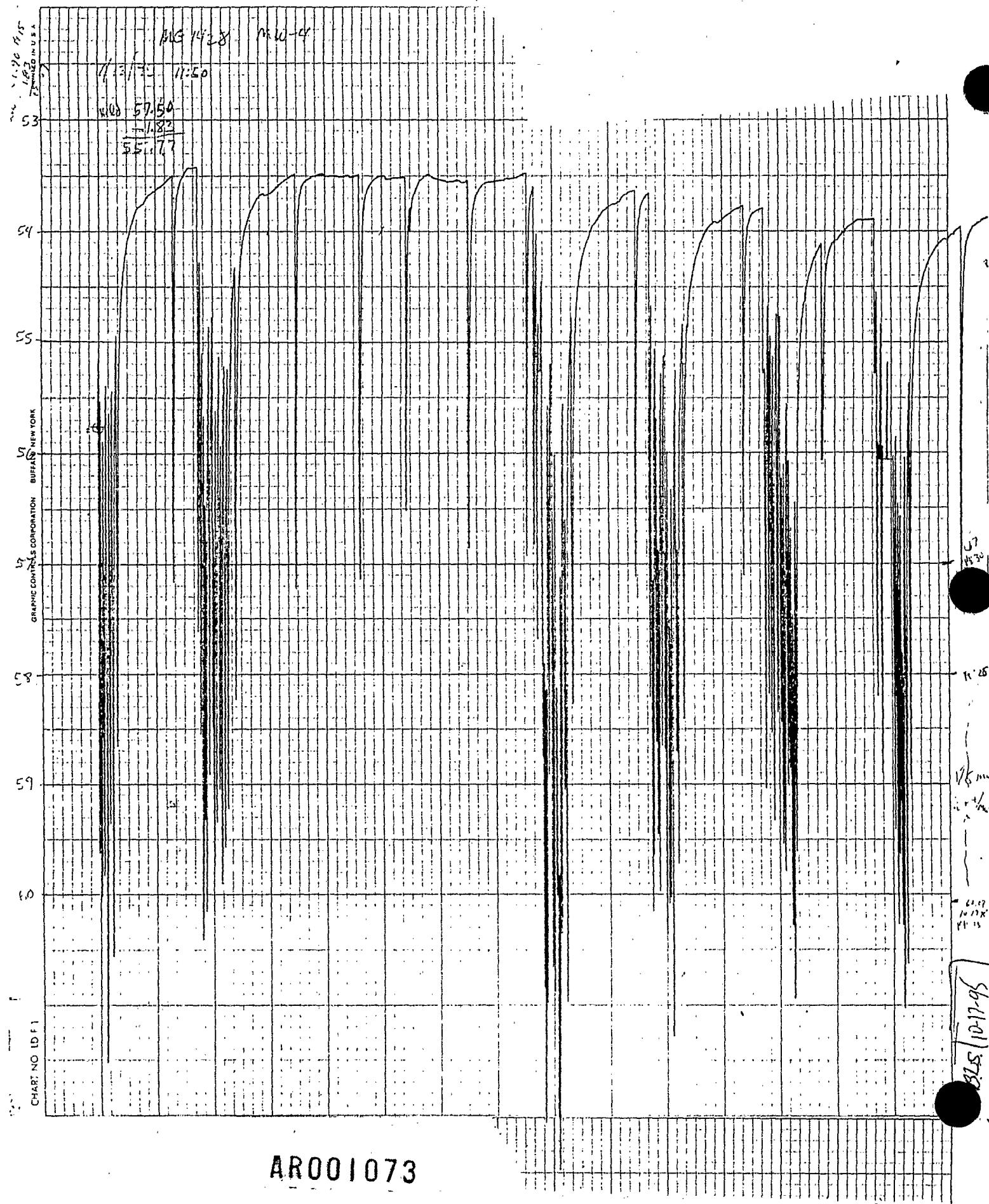
63



AR001072

WW 4 start date 7-13-95

8 day clock



AR001073

MW-5 NP-12

7/13/95 13:59

Head 62.93

NP(T.O.C) = 2.81

60.12

57

58

61

62

AR001074

MW-5 Start date 7-13-95

MW-7 start date 7-6-95

CHART

PRINTED IN U.S.A.

MW-1433 MW-7
7-6-95 19:00
~~35.28~~
~~-1.21~~
~~35.07~~

34

35

GRAPHIC CONTROLS CORPORATION
BUFFALO, NEW YORK

35

JO. ID F-1

35.51
35.45
35.55
35.21
35.25

AR001075

~~39.26 - 35.25 = 3.99~~ = 3.99 9-12-95

MW-8 start date 7-5-95

NP-12 mw-8 MG 1434

7-8-95 17:30

40.15 rpm

1.20 MP

38.75

42.51 - 1.20
38.81 L

39.25

38

39

40

41

42

42.6 - 1.20

(41.4)

39.975

CHART NO. ID F-1

GRAPHIC CONTROLS CORPORATION
BUFFALO, NEW YORK

PRINTED IN U.S.A.

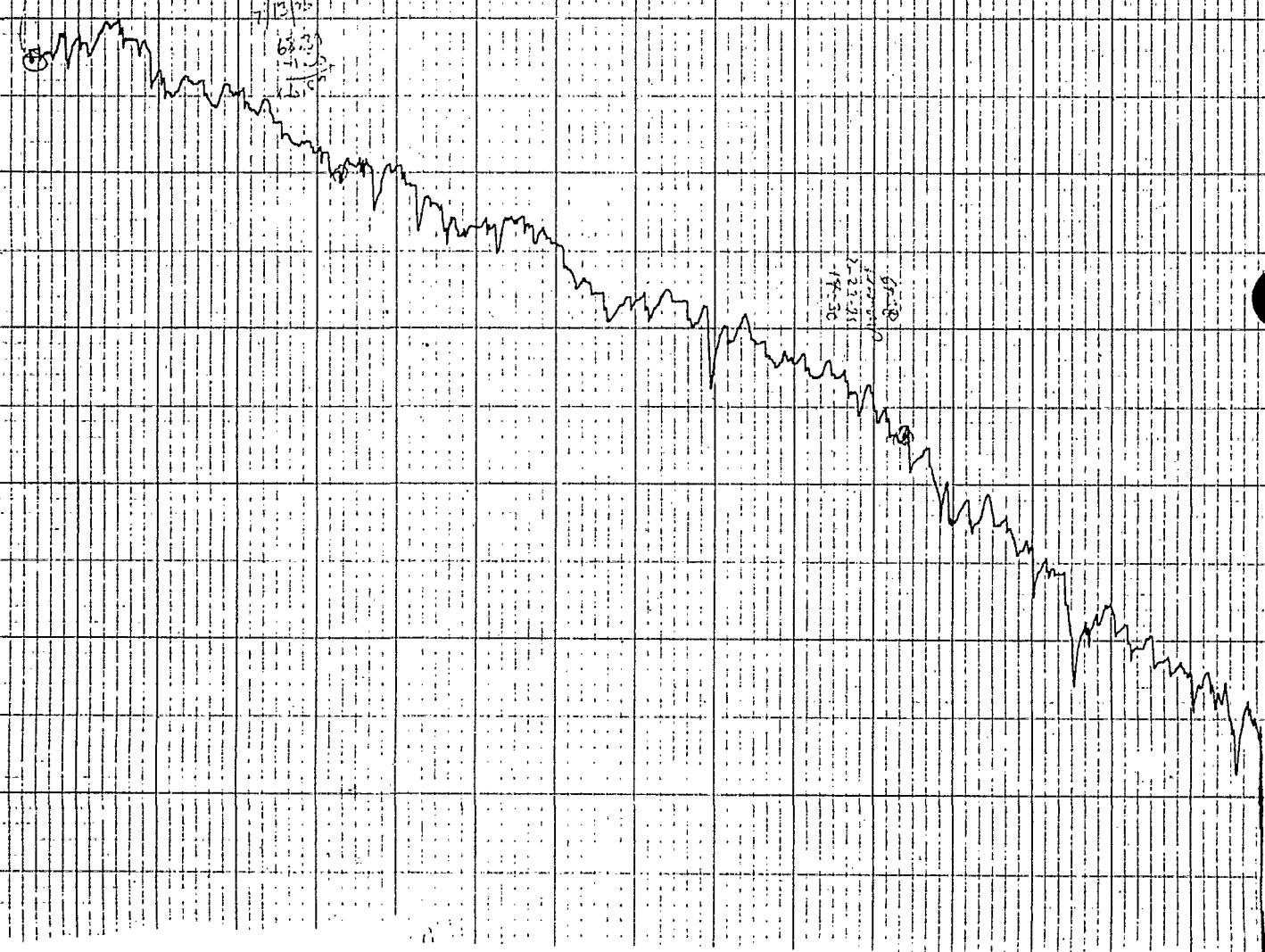
DP-12 MW-9

7-5-85 20:00

67.78
1.50

68.28

(Top)

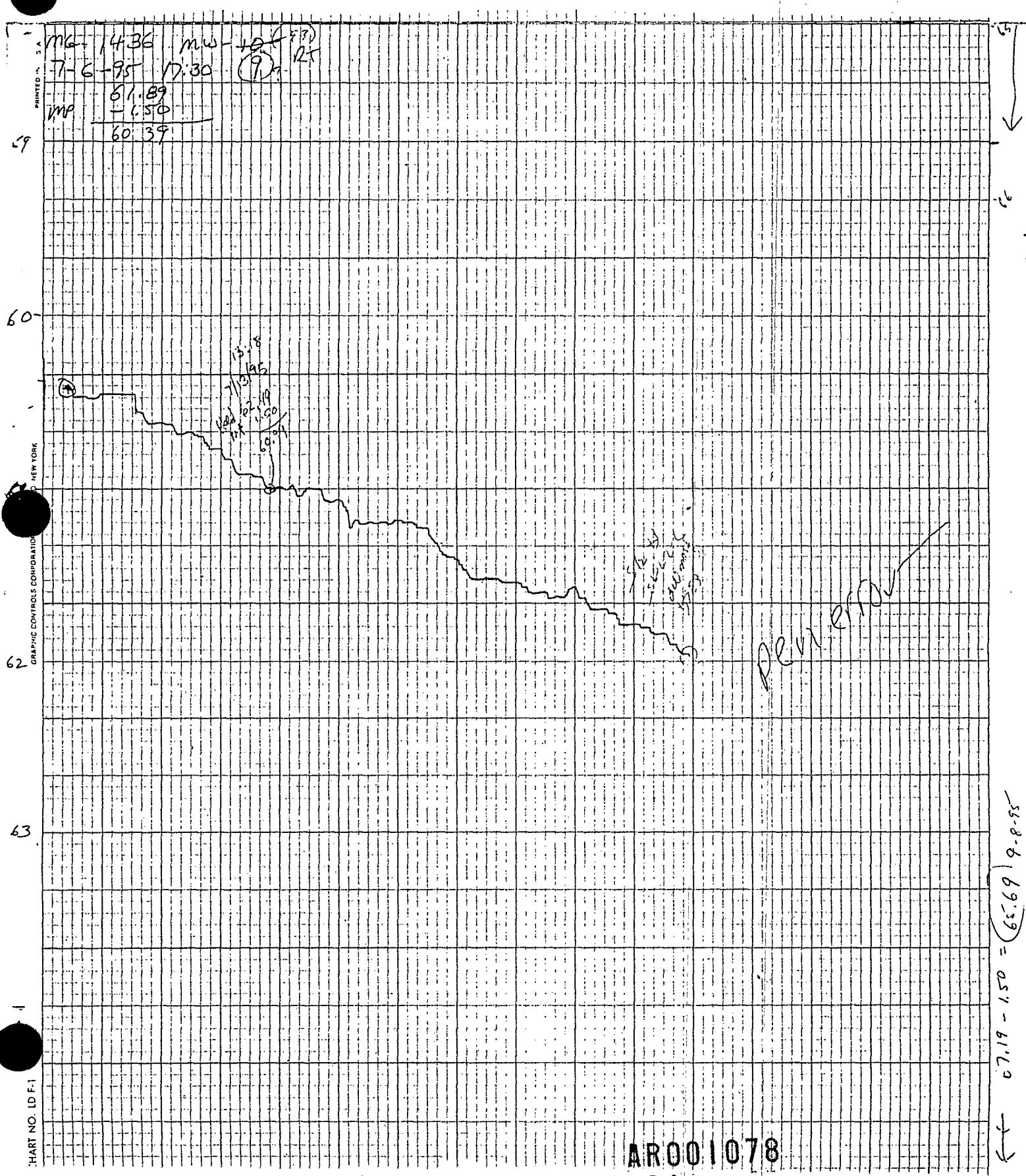


MW 9 start date 7-5-85

AR001077

3.8 - 1.50 = 72.30
20.00

MW-10 start date 7-6-95



MW-12 Start date 7-5-95

mg 1438 MW+12
7-5-95 1700

65.40 expt
1.90
63.50

63

64

65

66

67

68

ART NO. ID F-1

GRAPHIC CONTROLS CORPORATION BUFFALO NEW YORK

AR001079

9-12
158
150
160
168
179

T-3 Start date 6-30-95

R.P. 72

MG-1430 T-3

+ 2.35

+ 2.90

+ 28.35 max & TDC

+ 30.35 0945

PRINTED IN U.S.A.

6-30-95

27

28

GRAPHIC CONTROLS CORPORATION, BUFFALO, NEW YORK

30

31

32

JO ID F-1

ch - right leg
1/3/95 12:10

26.84

-2.90

+ 0.44

31.86
+ 2.90
34.76
319-2-95

A R 001 080

T5 Start date 7-13-95

CH

PRINTED IN U.S.A.

36

37

38

GRAPHIC CONTROLS CORPORATION
BUFFALO, NEW YORK

4

NO. ID F-1

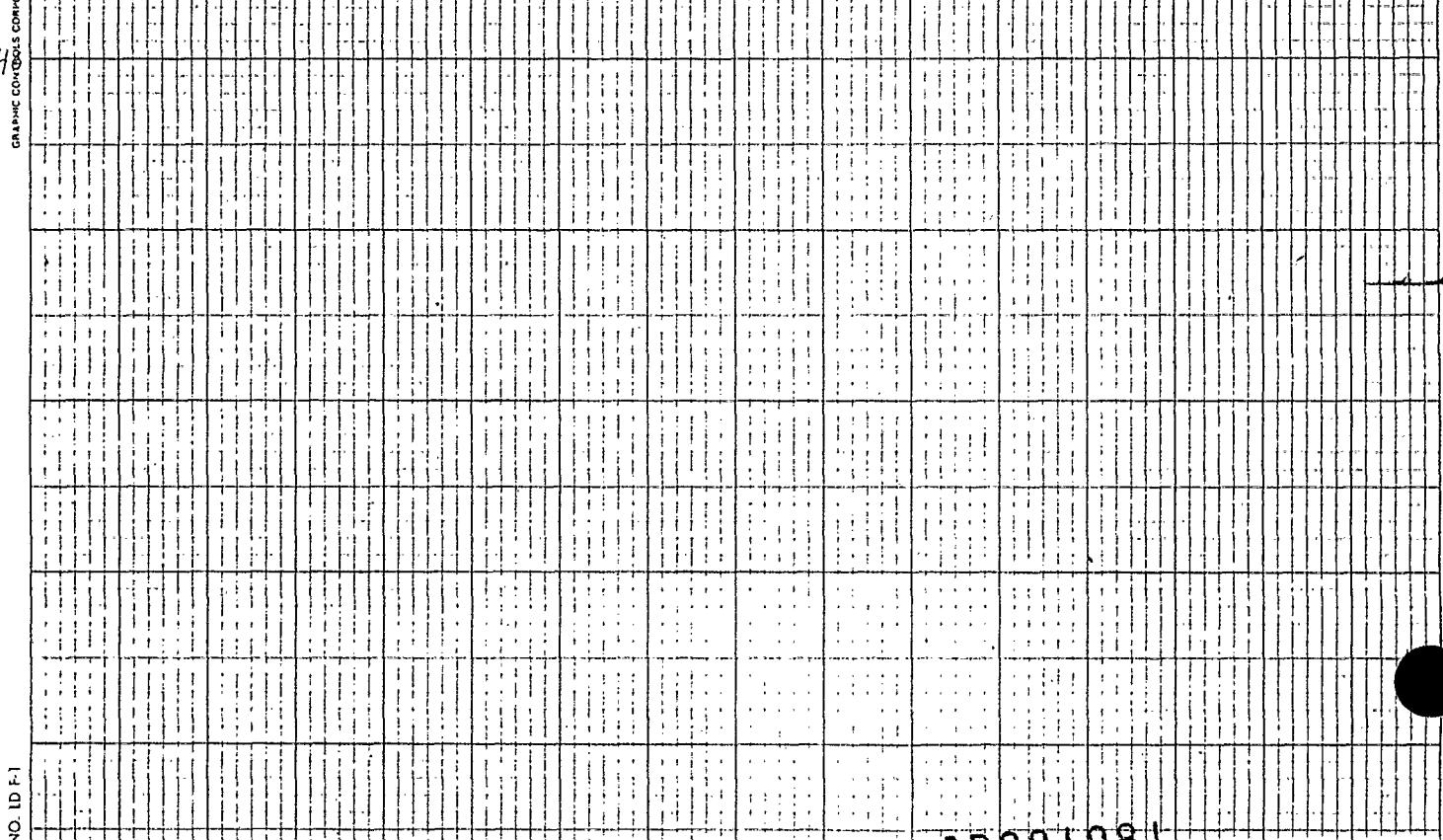
7/13/95

MG-1431

T5

12.30

Heed 37.59
MP 37.50
37.09



AR001081

M6-1925 M26-1
7246 9-8-95 11-95
233
7073

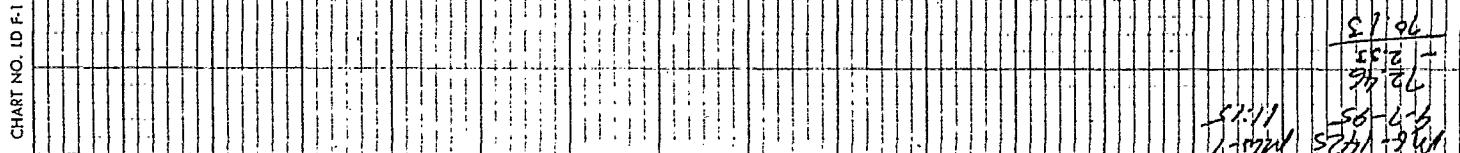
69

70

71

72

CHART NO. ID F-1



MW 1 Start date 9-8-95

AR001083

1381 M26-11-95

MW 2 Start date 9-12-95

PRINTED IN U.S.A.

MG-1426 (MW-2, NO-125)
9-12-95 15:30 KEC
71.40
-2.40
74.00

73

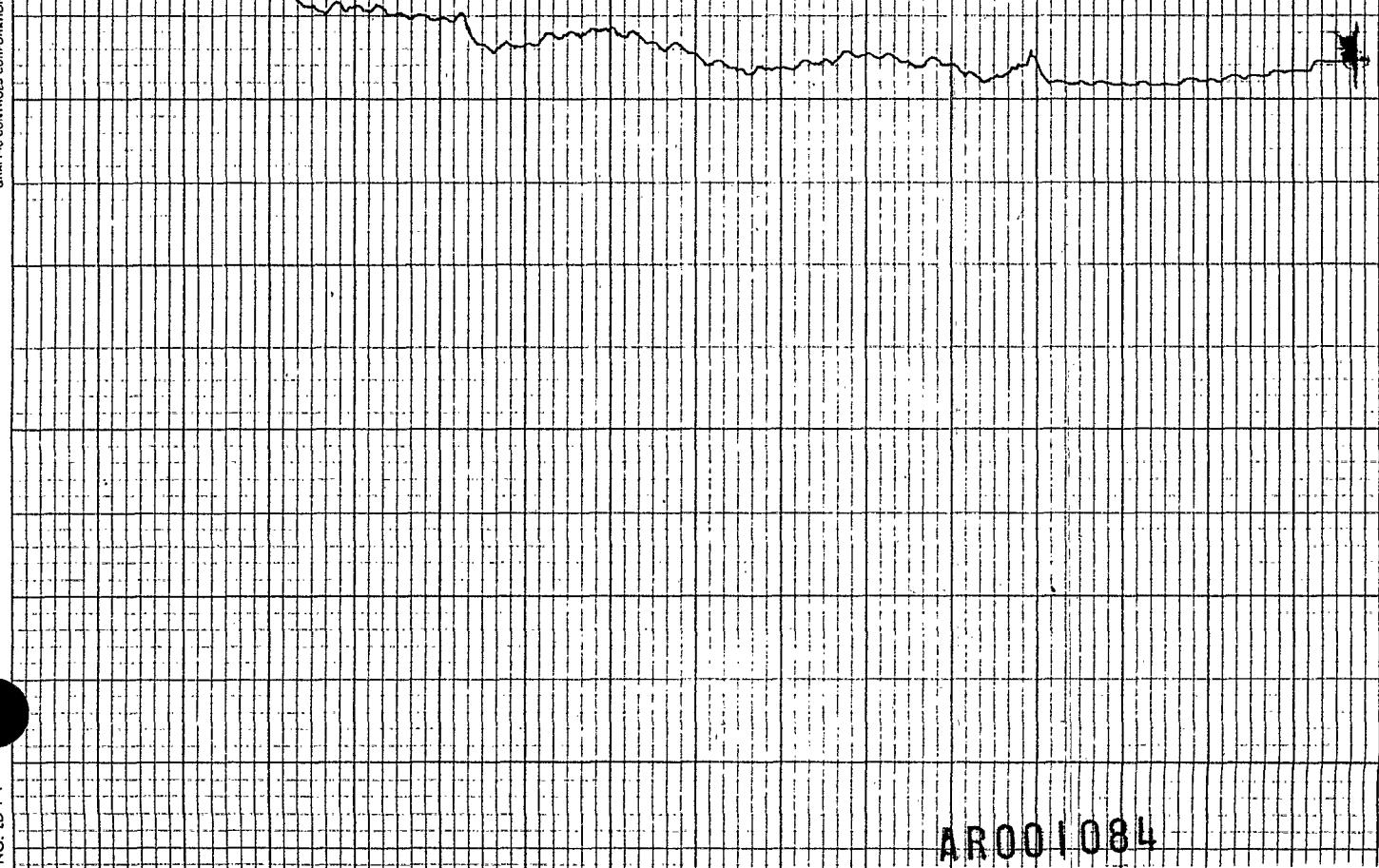
—

WTOK

75

76

NO. ID F1



AR001084

2012-09-12 15:30:00

MW3 Start date 9-12-95

PRINTED IN U.S.A.

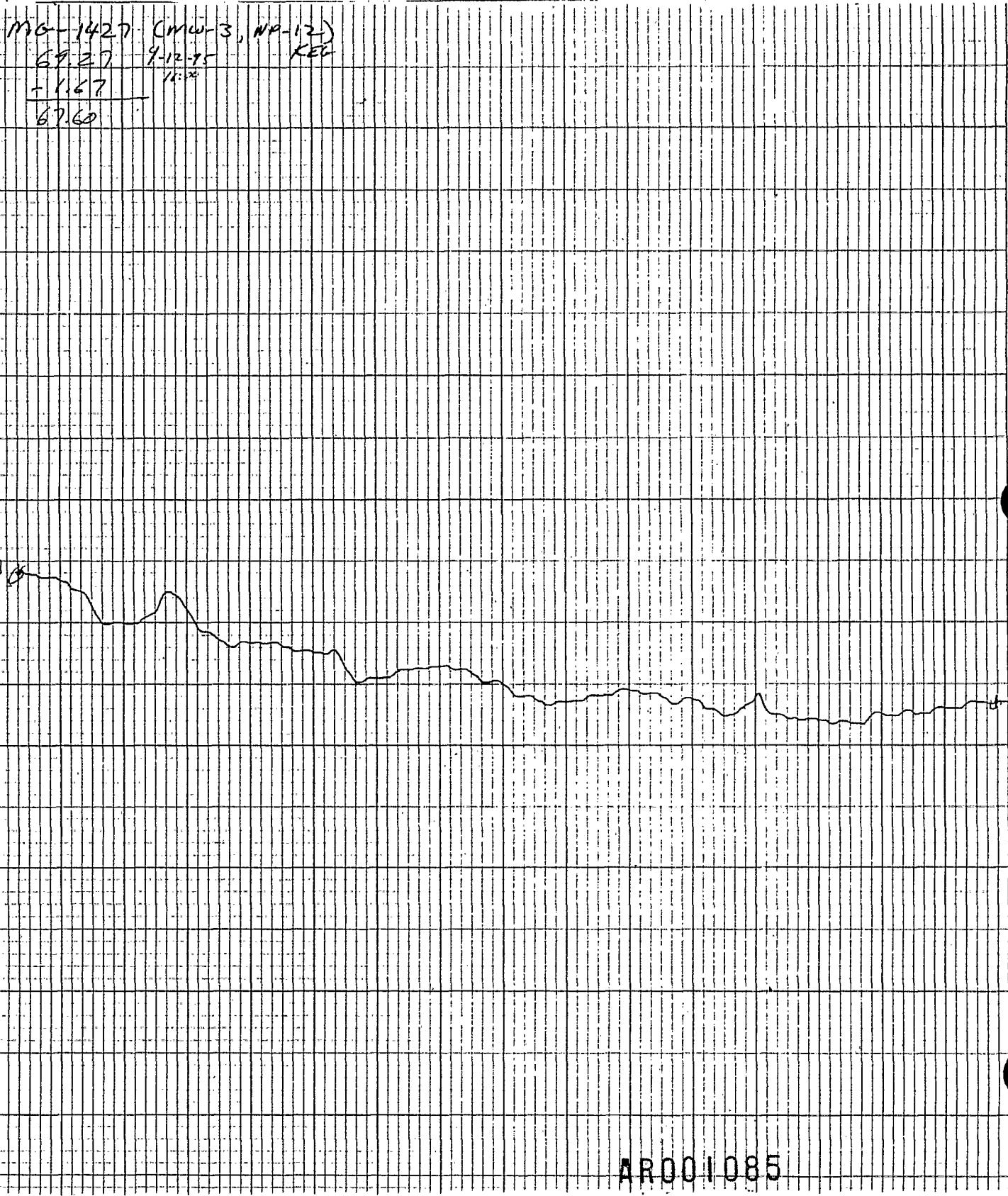
MG-1427 (MW-3, NP-12)
6927 9-12-95 KED
+1167 11:30
67.60

66

67

BUFFALO NEW YORK
GRAPHIC CONTROLS CORPORATION

T NO. LD F.1



AR001085

MW-7

start date 9-12-95

GRAPHIC CON

33

34

35

MG - 1429 (MW-7, WA-12)
1433 9-12-95 KEC
39.26 18.30
+ 1.67

36

37

38

DRACTION
BUFFALO NEW YORK

AR001086

MW - 8

start date 9-9-95

10136

nr

3823

-

1423

1213

3763

38

CHART NO.

PRINTED IN U.S.A.

MG! 1934 MW-8 NP-12
9-9-95 10:00
42.61 Below M1
1120
41.81

new battery

39

40
41
42
43

GRAPHIC CONTROLS CORPORATION

BUFFALO NEW YORK

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150

160

170

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270

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290

300

310

320

330

340

350

360

370

380

390

400

410

420

430

440

450

460

470

480

490

500

510

520

530

540

550

560

570

580

590

600

610

620

630

640

650

660

670

680

690

700

710

720

730

740

750

760

770

780

790

800

810

820

830

840

850

860

870

880

890

900

910

920

930

940

950

960

970

980

990

1000

1010

1020

1030

1040

1050

1060

1070

1080

1090

1100

1110

1120

1130

1140

1150

1160

1170

1180

1190

1200

1210

1220

1230

1240

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2080

2090

2100

2110

2120

2130

2140

2150

2160

2170

2180

2190

2200

2210

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2230

2240

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2390

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2770

2780

2790

2800

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2830

2840

2850

2860

2870

2880

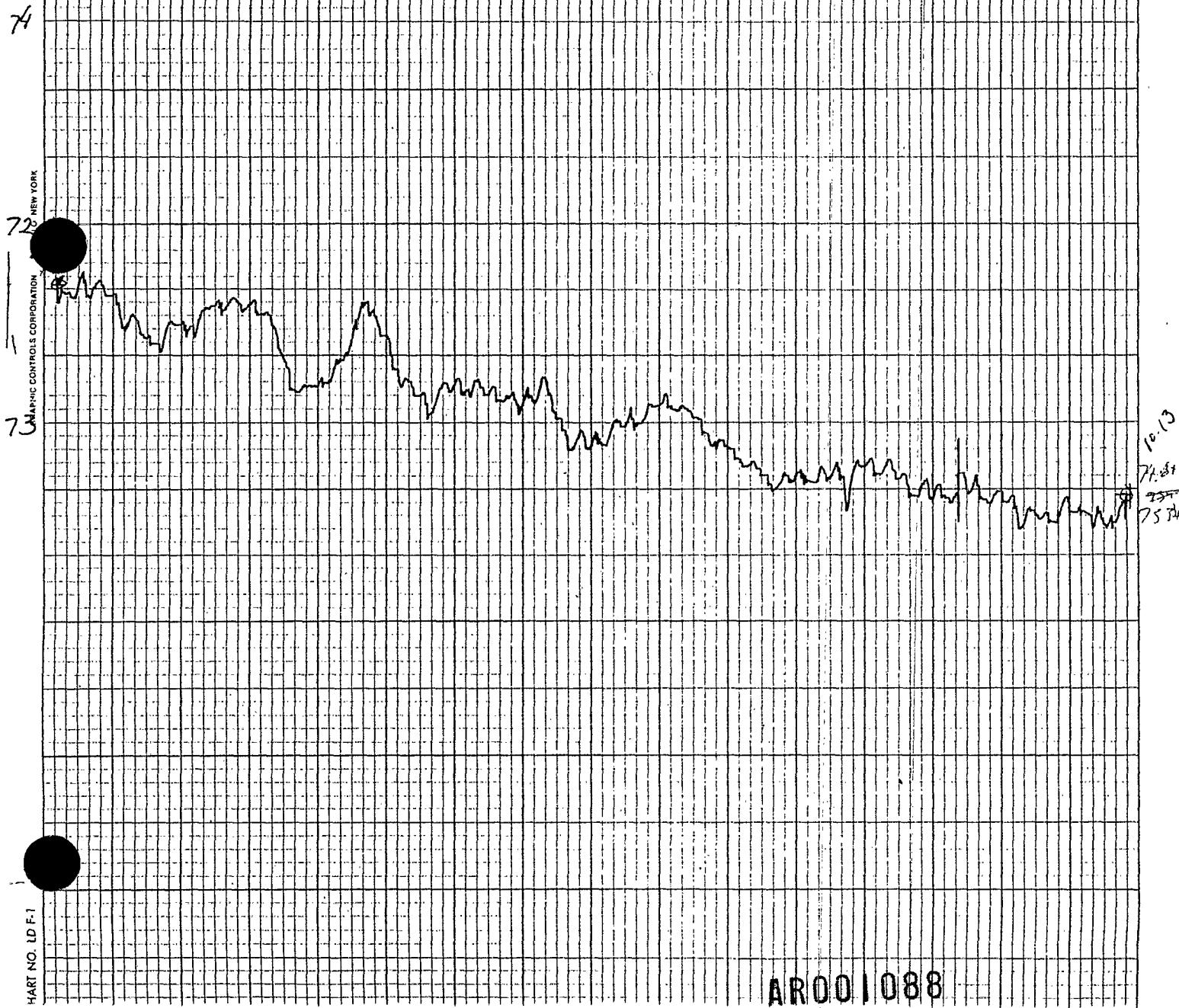
2890

2900

MW-9 Start date 9-7-95

PRINTED IN U.S.A.

MG-1456 M.W.-9 NY-12
9-7-95 10:30 10 surface left
73.80
= 1.50
72.30



FART NO 1DF-E-1

MW-10 Start date 9-8-95

PRINTED IN U.S.A.

MG-1936 Mar 19 Lt. closest to trail

9-22 11:00

12 19 - 22-23

卷之三

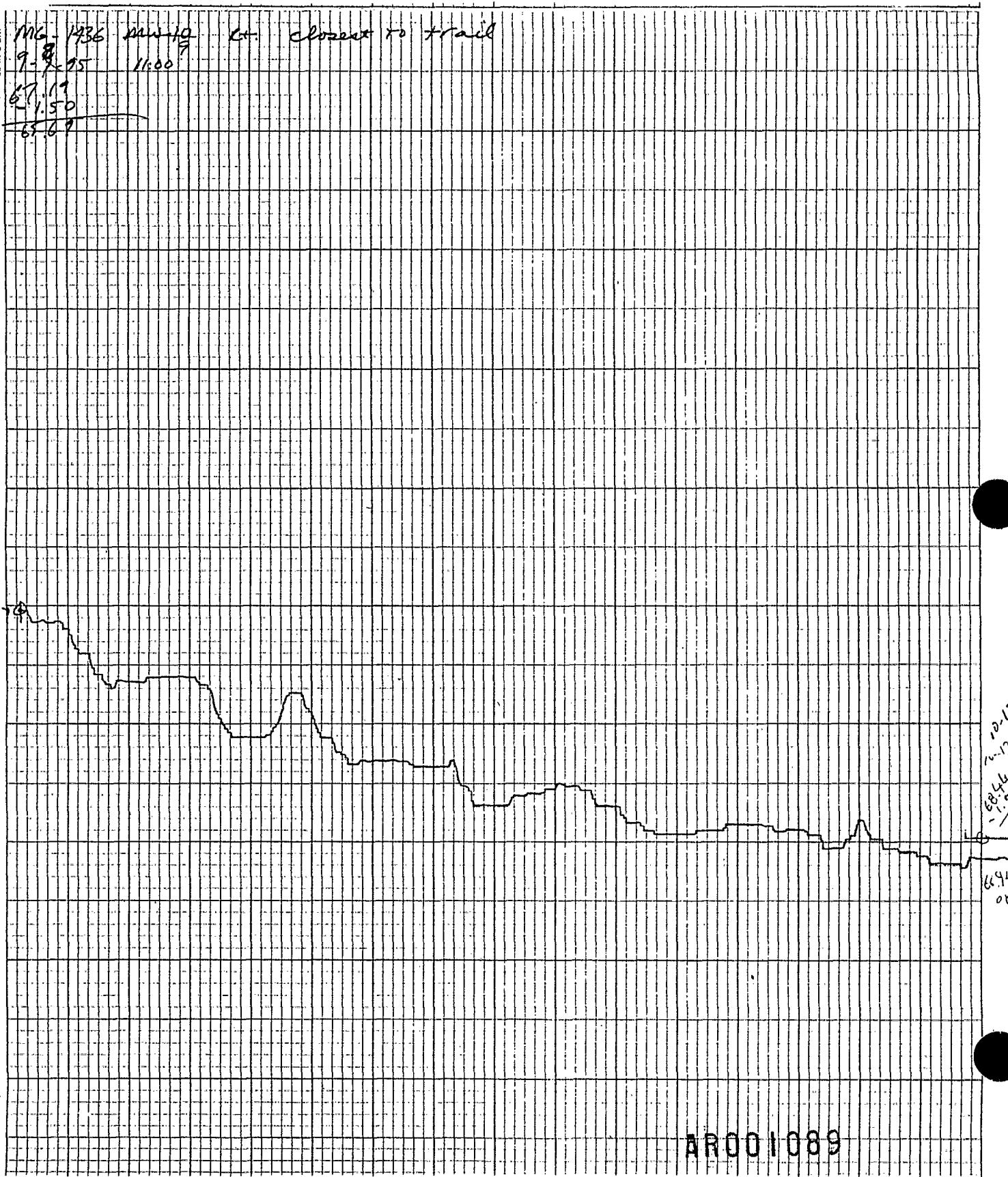
17

三

64

65 NEW YORK

GRAPHIC CONTROLS CORPORATION



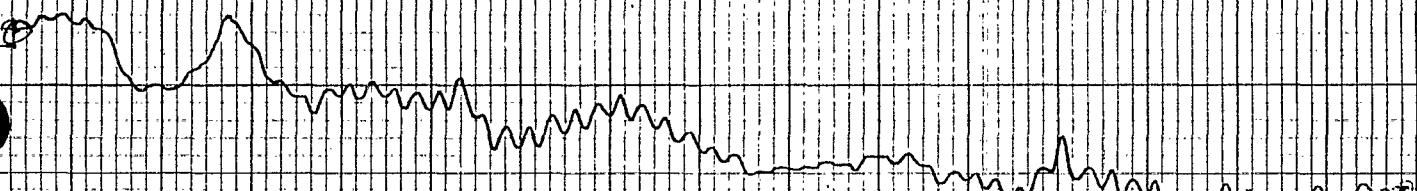
MW 12 start date 9-12-95

PRINTED IN U.S.A.
MOT-MG-1438 (MW-12, NP-12)
71.58 8' Casing KEG
- 1.90 9-12-95
69.68 17:00

69

70 NEW YORK

GRAPHIC CONTROLS CORPORATION

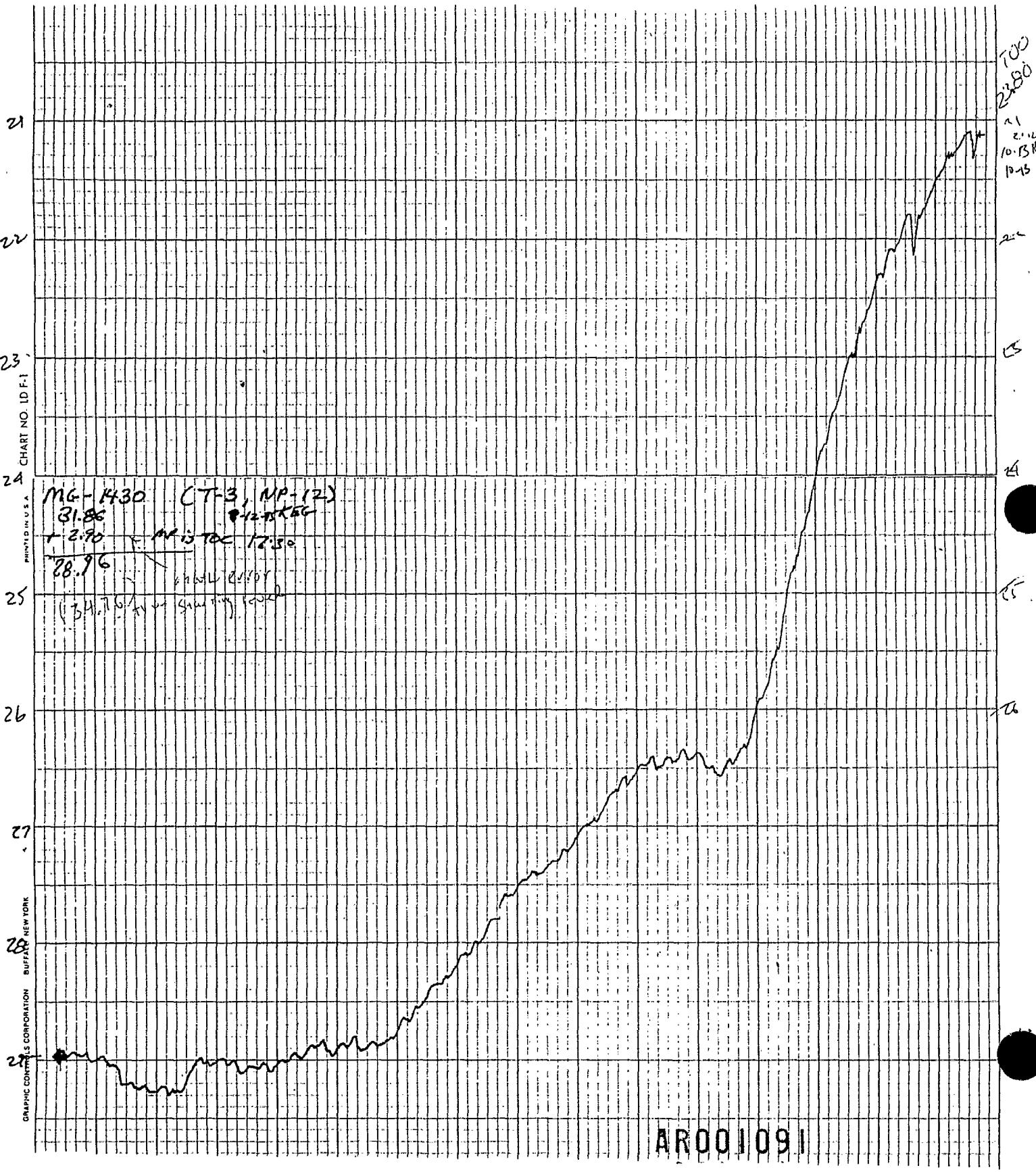


72-48 (22:55)
12/13/95

CHART NO. ID F.1

AR001090

T-3 start date 9-12-95



T-5

start date 9-12-95

35

36

37

38

M.G. 1431 (T-5, NR-12)
42.6 9-12-95 KEG

50 18:00

42.30

39

40

41

42

43

NEW YORK

U.S. CORPORATION

31.38

30.88

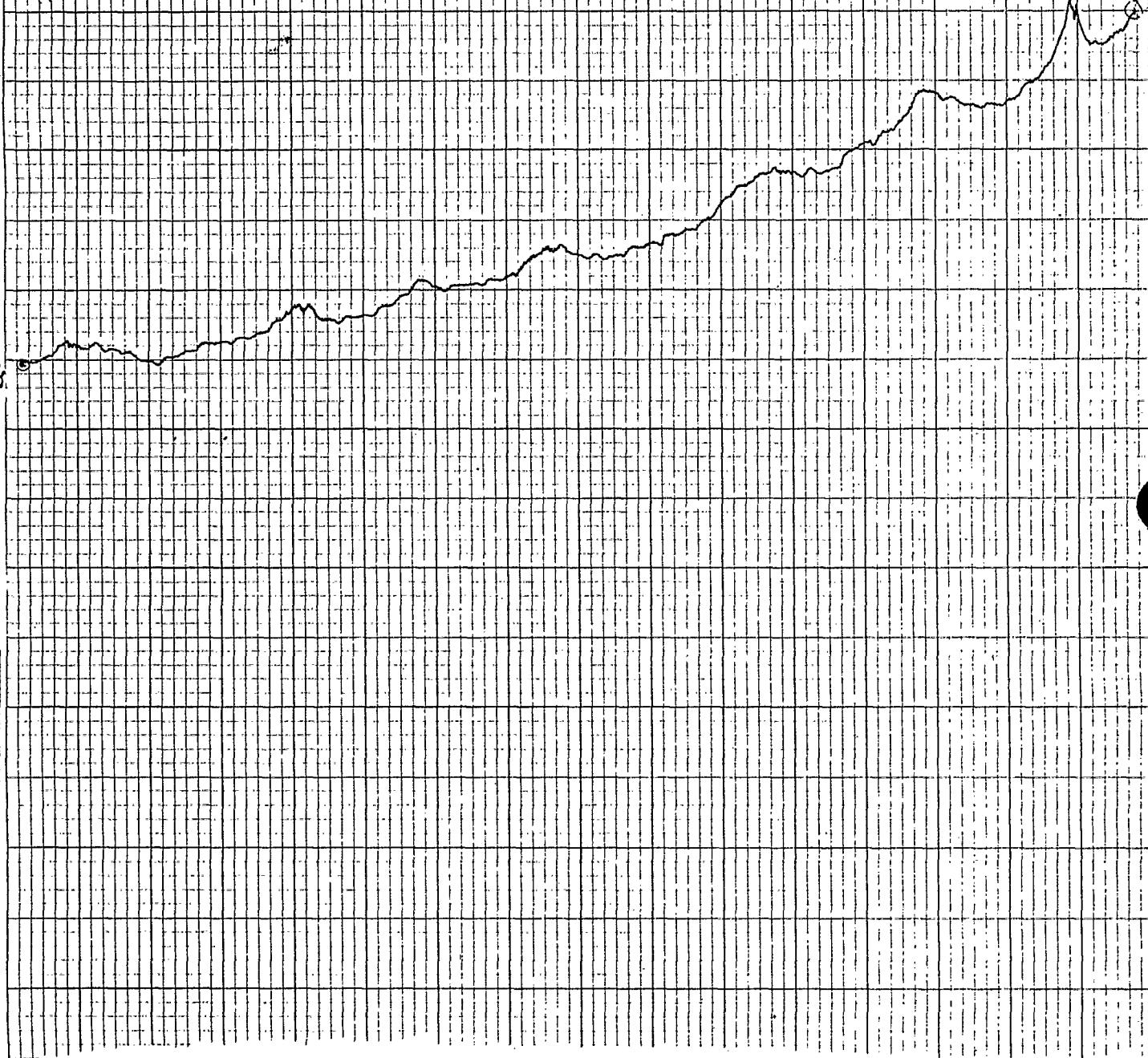
10-17-95

AR001092

MG-425 (MW1-NP-12)
 10-13-95 11:15
~~73.87 mpo~~
~~=2.32~~
~~7.4 SLS~~

REC

11/13/95
 16:30 71.30
~~-12.32~~
~~69.05~~



MW1 Start date 10-13-95

AR001093

NO. LD F-1
PRINTED IN U.S.A.

74 NEW YORK
75 CLEVELAND
76 RECORDING CHARTS

MW-1426 (MW-2, NP-12)

10-13-95 12:15

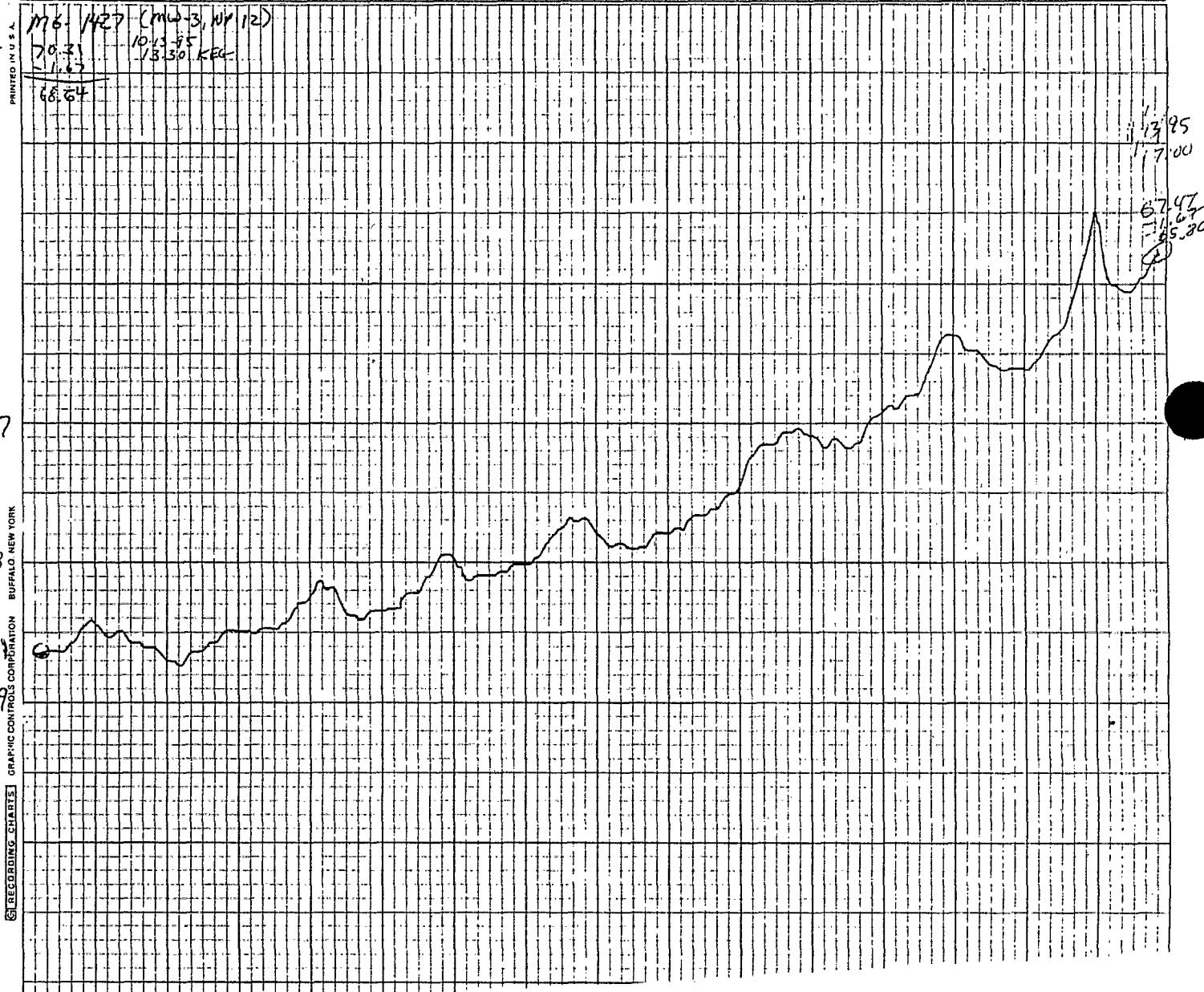
77 12
2.40

74 76

11 13 195
5 50
460 74 70
MP - 2.40
72.30

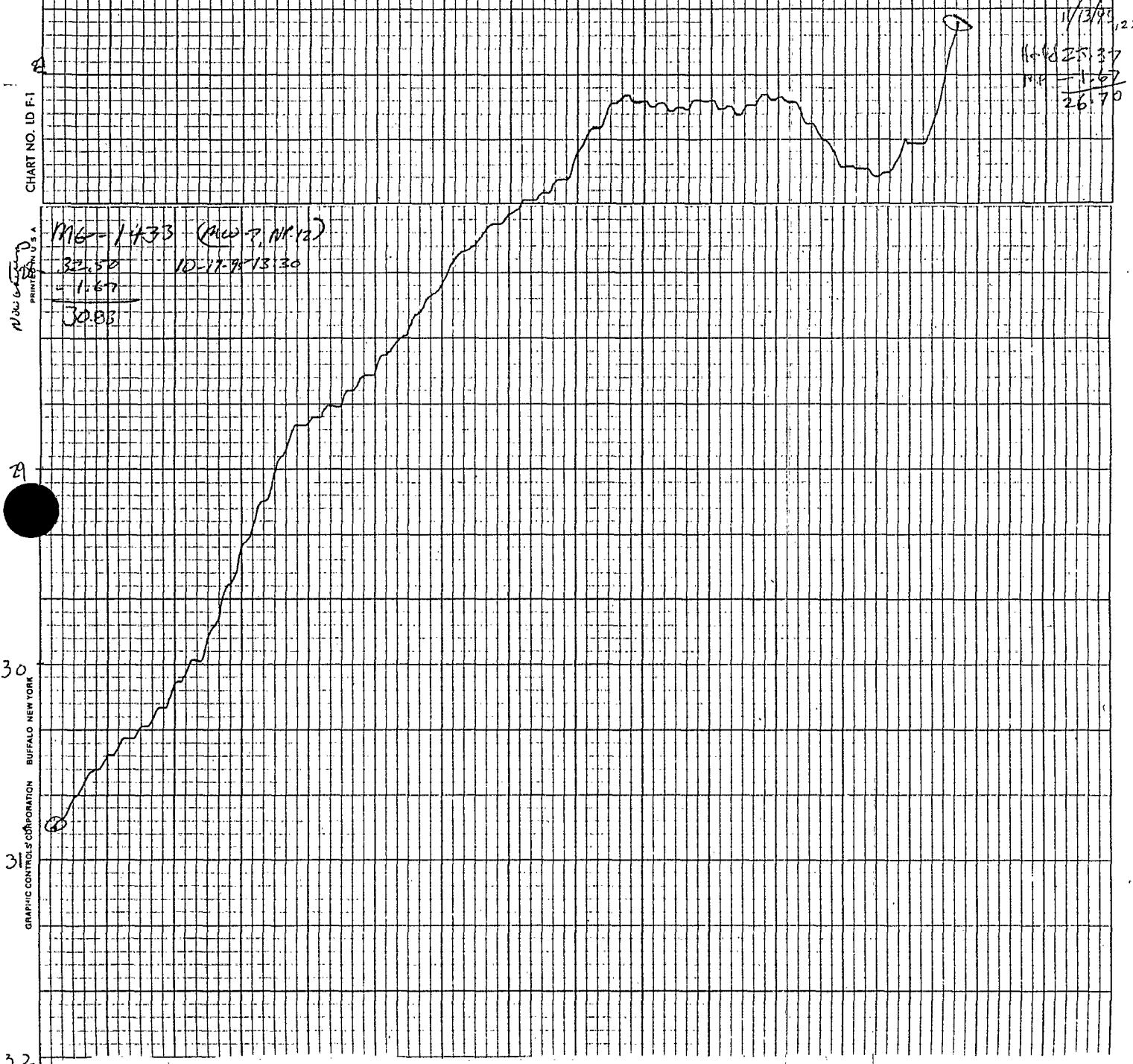
MW-2 Start date 10-13-95

AR001094



MW-3 Start date 10-13-95

AR001095



MW-7

start date 10-17-95

AR001096

38

RECORD

16.30
11.31/95
16.33.11
1.20
10.11

CHART NO. LD F-1

38.03
0.03
minutus U.S.A.

MW-1434 (MW-8 NY-12)

10-13-95 12:32

38.23

1.24

39.03 REG

36

37

38

GRAPHIC CONTROLS CORPORATION BUFFALO, NEW YORK

MW-8 Start date 10-13-95

AR001097

1435 (most of time)
13-95 15:00 MW-9
1434
1430
73.34

11345 16:16

clock running
clock stopped moving

72

73

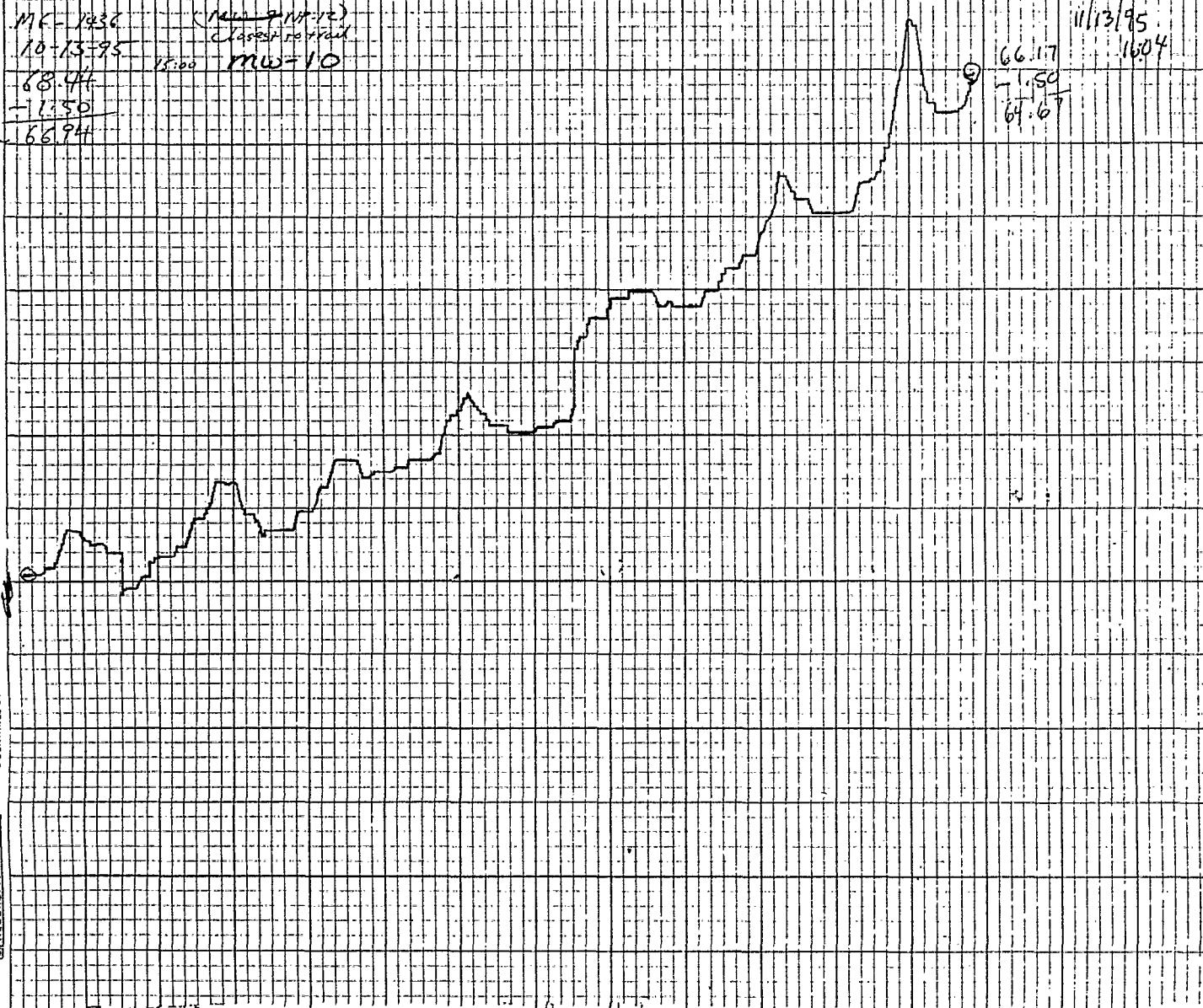
74

MW-9 start date 10-13-95

AR001098

CHART NO. ID F-1

New Bottom
PRINTED IN U.S.A.



MW 10 Start date 10-13-95

AR001099

1438 (MW-12 09-17)

72.48 15.50

11.96

70.58

16.45

14.83 95

70.10

11.90

68.20

GRAPHIC RECORDING CHARTS

PRINTED IN U.S.A.

BY

GRAPHIC CONTROLS CORP.

BUFFALO, NEW YORK

2

1

0

69

70

71

72

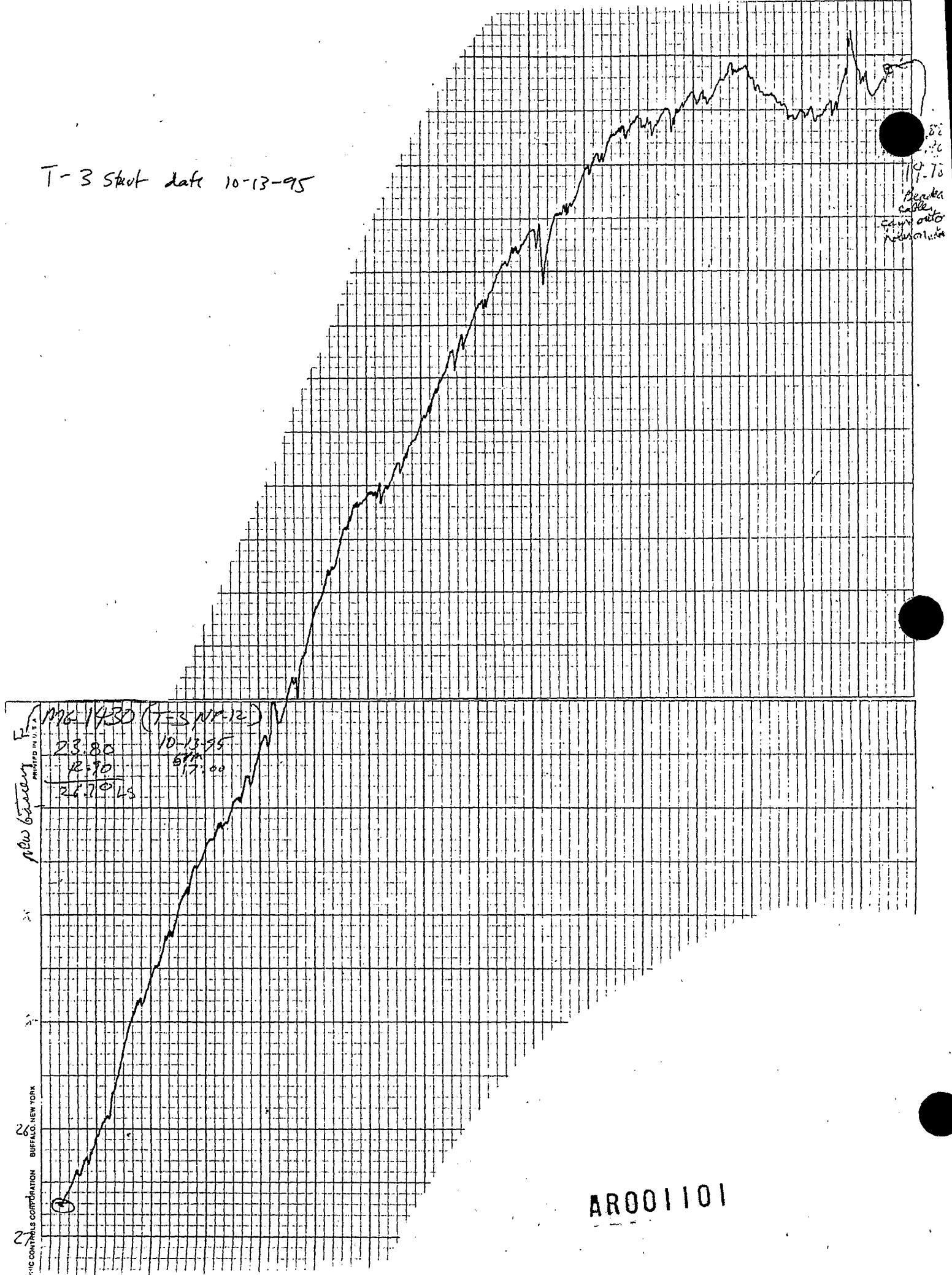
73

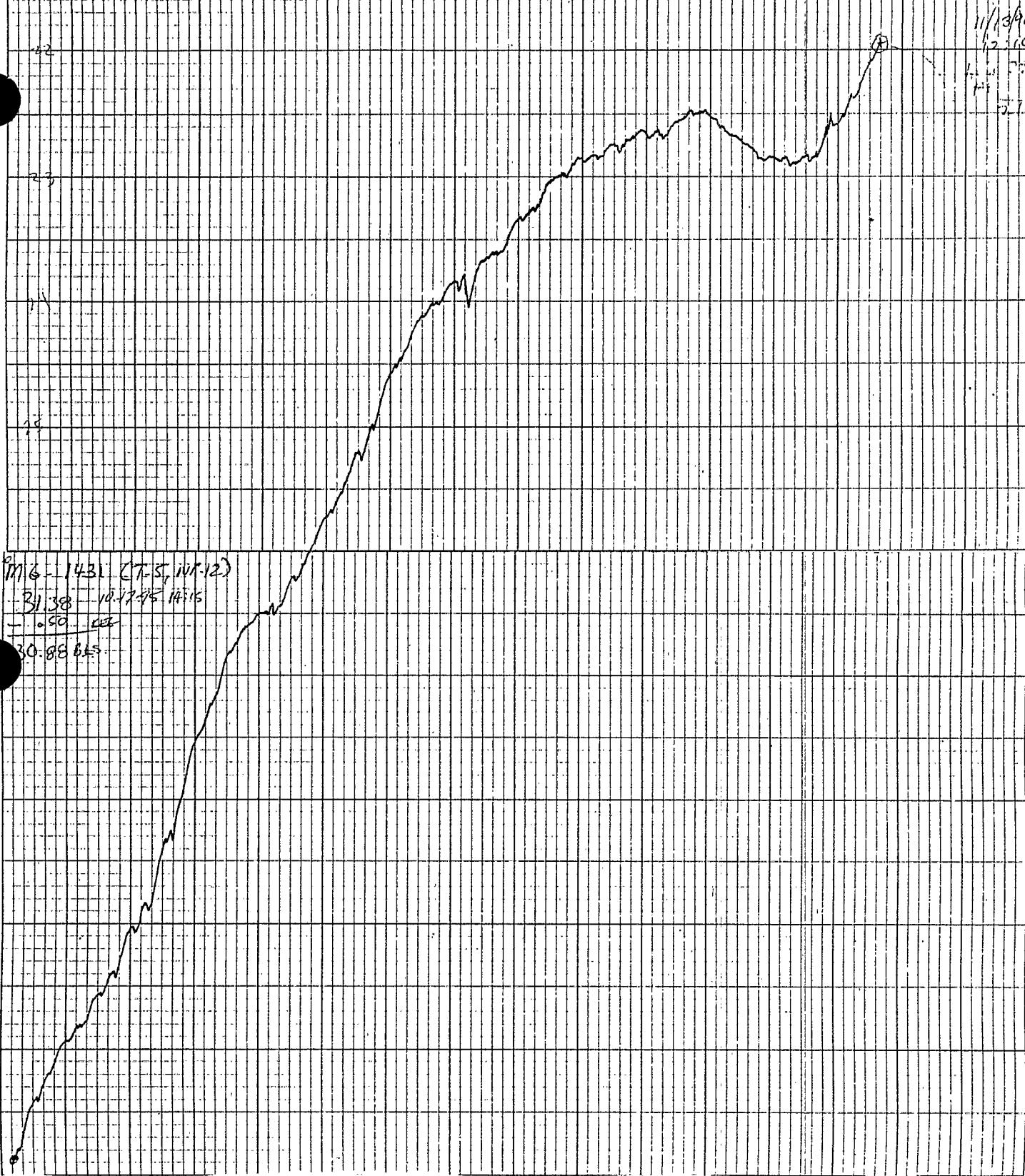
74

MW-12 Start date 10-13-95

AROO1100

T-3 Start date 10-13-95





T-5 Start date 10-17-95

AR001102